

DOCUMENT NO.: I20 06739 US  
Customer No.: 000128

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: : Charles Q. Zhan et al.  
Application No. : 10/717,086  
Filed : November 19, 2003  
For : APPARATUS AND METHOD FOR IDENTIFYING  
DEFECTIVE VALVES  
Group No. : 2863  
Examiner : Xiuqin Sun

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

**INFORMATION DISCLOSURE STATEMENT**

Pursuant to the duty of disclosure under 37 C.F.R. § 1.56, Applicant submits this statement.

This submittal is made in accordance with 37 C.F.R. §§ 1.97 and 1.98 and § 609 of the Manual of Patent Examining Procedure. The patents and publications herein are listed below and on the attached Forms PTO/SB/08A & B. Copies of the listed publications are submitted herewith.

<u>U.S. Patent No.</u>	<u>Inventor</u>	<u>Date</u>
5,381,697	van der Pol	January 17, 1995
5,594,180	Carpenter et al.	January 14, 1997
5,641,891	Frankl et al.	June 24, 1997

<u>U.S. Patent No.</u>	<u>Inventor</u>	<u>Date</u>
5,966,674	Crawford et al.	October 12, 1999
6,208,943	Randolph et al.	March 27, 2001
6,408,676	Stratton et al.	June 25, 2002
6,505,517	Eryurek et al.	January 14, 2003
6,539,315	Adams et al.	March 25, 2003
6,654,697	Eryurek et al.	November 25, 2003
6,725,167	Grumstrup et al.	April 20, 2004

Publications

Fujun He et al. "WPT-SVMs Based Approach for Fault Detection of Valves in Reciprocating Pumps", Proceedings of the American Control Conference, Anchorage, AK, May 8-10, 2002, Pp. 4566-4570.

Jiang Wanlu et al., "Applying Multiresolution Analysis for Processing of Hydraulic Pump Fault Signal", Pp. 1-5.

Wang et al., "The Fault Character of the Motors Identified Based on Wavelet Transform", November 2-5, 2003, Proceedings of the Second International Conference on Machine Learning and Cybernetics, Xi'an, Pp. 2394-2398.

Mallat et al., "Singularity Detection and Processing with Wavelets", March 1992, IEEE Transactions on Information Theory, Vol. 38, No. 2, Pp. 617-643.

Applicant hereby expressly reserves the right to swear behind the effective dates of any of the above Patents and to question the relevance and materiality of the Patents and Publications listed herein, in whole, in part, or in combination, subsequent to filing this Information Disclosure Statement.


DOCKET NO.: I20 06739US  
APPLICATION NO.: 10/717,086  
PATENT

This Information Disclosure Statement is being transmitted after the mailing date of the first Office Action on the merits. Therefore, Applicant encloses a check in the amount of \$180.00 for the Information Disclosure Statement filing fee.

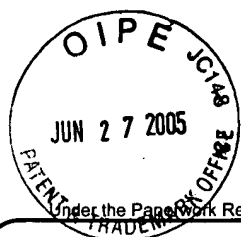
Respectfully submitted,

DAVIS MUNCK, P.C.

Date: June 24, 2005

  
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PTO/SB/08A (08-03)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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STATEMENT BY APPLICANT**

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Sheet 1 of 2

**Complete if Known**

Application Number	10/717,086
Filing Date	November 19, 2003
First Named Inventor	Charles Q. Zhan
Art Unit	2863
Examiner Name	Xiuqin Sun
Attorney Docket Number	I20 06739US

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	AA	US- 5,381,697	01/17/1995	van der Pol	
	AB	US- 5,594,180	01/14/1997	Carpenter et al.	
	AC	US- 5,641,891	06/24/1997	Frankl et al.	
	AD	US- 5,966,674	10/12/1999	Crawford et al.	
	AE	US- 6,208,943	03/27/2001	Randolph et al.	
	AF	US- 6,408,676	06/25/2002	Stratton et al.	
	AG	US- 6,505,517	01/14/2003	Eryurek et al.	
	AH	US- 6,539,315	03/25/2003	Adams et al.	
	AI	US- 6,654,697	11/25/2003	Eryurek et al.	
	AJ	US- 6,725,167	04/20/2004	Grumstrup et al.	
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**FOREIGN PATENT DOCUMENTS**

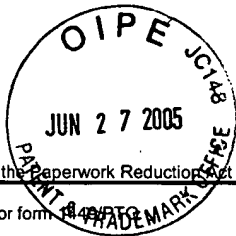
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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STATEMENT BY APPLICANT**

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Sheet 2 of 2

Application Number 10/717,086

Filing Date November 19, 2003

First Named Inventor Charles Q. Zhan

Art Unit 2863

Examiner Name Xiuqin Sun

Attorney Docket Number I20 06739US

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	BA	Fujun He et al. "WPT-SVMs Based Approach for Fault Detection of Valves in Reciprocating Pumps", Proceedings of the American Control Conference, Anchorage, AK, May 8-10, 2002, Pp. 4566-4570.	
	BB	Jiang Wanlu et al., "Applying Multiresolution Analysis for Processing of Hydraulic Pump Fault Signal", Pp. 1-5.	
	BC	Wang et al., "The Fault Character of the Motors Identified Based on Wavelet Transform", November 2-5, 2003, Proceedings of the Second International Conference on Machine Learning and Cybernetics, Xi'an Pp. 2394-2398.	
	BD	Mallat et al., "Singularity Detection and Processing with Wavelets", March 1992, IEEE Transactions on Information Theory, Vol. 38, No. 2, Pp. 617-643.	

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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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